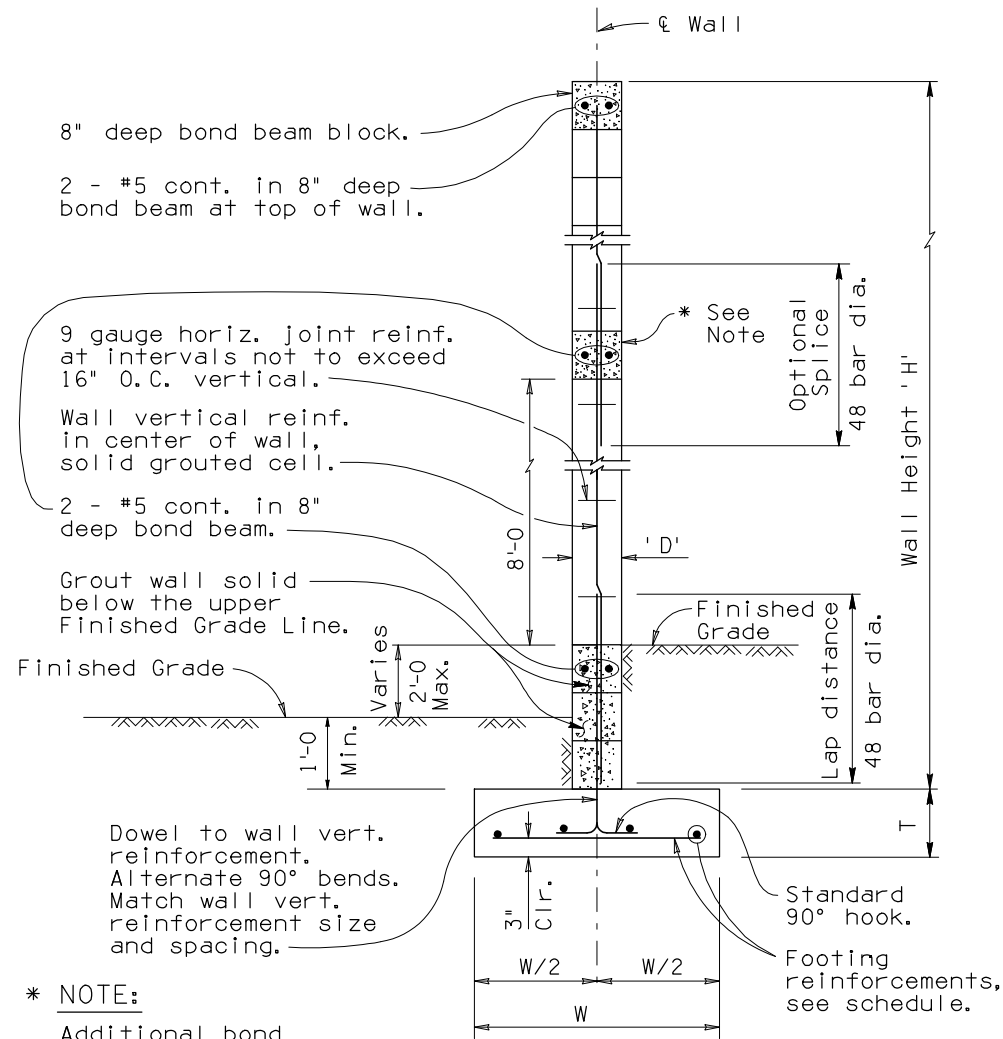


Note to Designer:  
The information presented in this Standard Detail has been prepared in accordance with recognized engineering principles and is for general use. It should not be used for specific application without competent professional examination and verification of its suitability and applicability by a licensed professional engineer. Contents within the inner border line shall not be altered.

| NO | DESCRIPTION OF REVISIONS           | MADE BY |        | DATE   |       |
|----|------------------------------------|---------|--------|--------|-------|
|    |                                    | 6.U.H.  | 6.U.H. | 10-99  | 02-07 |
| 1  | Original Issue                     |         |        |        |       |
| 2  | Wall Height Extension              |         |        | 4-03   |       |
| 3  | Clarify Joint Detail               |         |        | 6.U.H. |       |
| 4  | Revise Reinforcing, General Update |         |        | 6.U.H. |       |



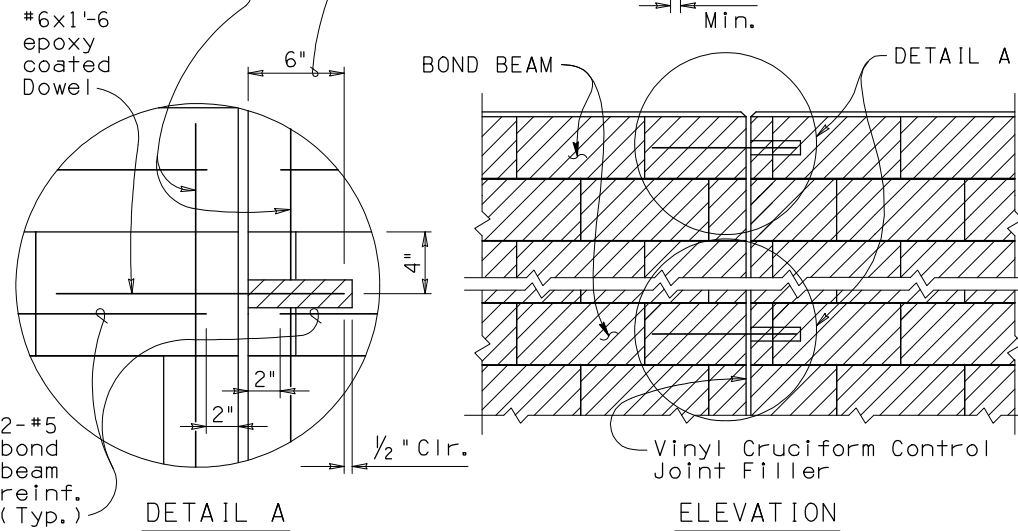
**\* NOTE:**

Additional bond beam required for wall height H=12' and higher.

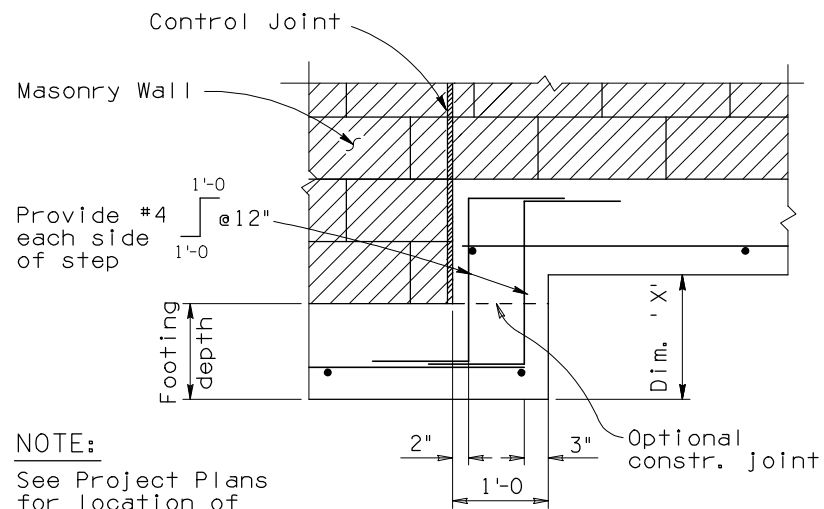
**TYPICAL WALL SECTION**  
(For Wall Height 0'-0 to 17'-11)

Vertical reinforcement in grouted cells, both sides of joints.

Enclose portion of #6 bar in 1/2" minimum thickness of expanded polystyrene thus: 1/2" Min.



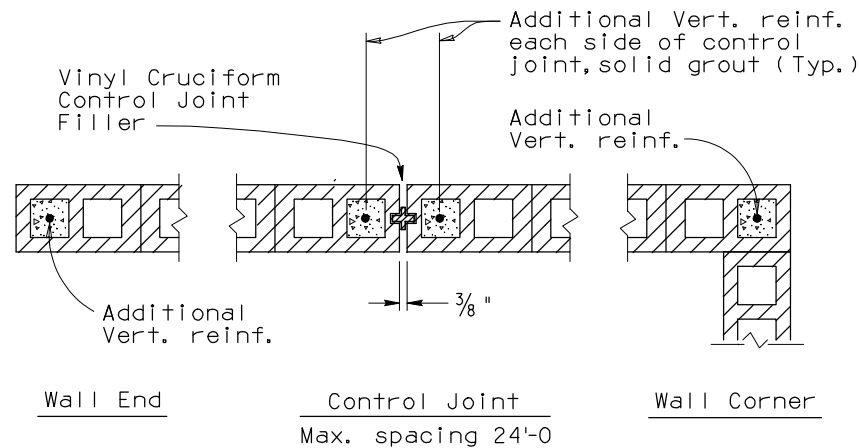
**TYPICAL BOND BEAM DETAIL AT CONTROL JOINT**  
(For bond beams above the upper Finished Grade Line)



**NOTE:**

See Project Plans for location of footing steps and Dim. 'X'.

**FOOTING STEP DETAIL**



**WALL DETAILS AT JOINTS AND ENDS**

**NOTE:**

See DWG. SD 8.02 (2 of 2) "TYPICAL SECTIONS THROUGH VERTICAL WALL REINFORCEMENT" for similar details not shown here.

| WALL SCHEDULE    |                   |                 |                 |                |               |              |                                                 |
|------------------|-------------------|-----------------|-----------------|----------------|---------------|--------------|-------------------------------------------------|
| Wall Height<br>H | Wall Thick<br>D** | Ftg. Depth<br>T | Ftg. Width<br>W | Reinforcing*** |               |              | Min. Req. Allowable Soil Bearing Capacity (psf) |
|                  |                   |                 |                 | Wall           | Footing       |              |                                                 |
|                  |                   |                 |                 | Vert.          | Bottom Trans. | Bottom Long. |                                                 |
| 0'-0 to 3'-11    | 8"                | 10"             | 1'-6            | #4@24"         | #4@24"        | 2-#4         | 1,000                                           |
| 4'-0 to 5'-11    | 8"                | 10"             | 2'-0            | #4@24"         | #4@24"        | 2-#4         | 1,300                                           |
| 6'-0 to 7'-11    | 8"                | 10"             | 2'-6            | #5@24"         | #5@24"        | 4-#4         | 1,500                                           |
| 8'-0 to 9'-11    | 8"                | 10"             | 3'-0            | #5@24"         | #5@16"        | 4-#4         | 1,600                                           |
| 10'-0 to 11'-11  | 8"                | 1'-0            | 3'-6            | #5@16"         | #5@16"        | 4-#5         | 1,700                                           |
| 12'-0 to 13'-11  | 12"               | 1'-3            | 4'-6            | #5@16"         | #5@16"        | 6-#5         | 1,900                                           |
| 14'-0 to 15'-11  | 12"               | 1'-6            | 5'-0            | #6@16"         | #6@16"        | 6-#5         | 2,000                                           |
| 16'-0 to 17'-11  | 12"               | 1'-6            | 5'-6            | #8@16"         | #6@16"        | 6-#5         | 2,100                                           |

\*\* Nominal Dimension, \*\*\* Additional Reinf. required at Control Joints.

**GENERAL NOTES:**

Construction - Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, Current Edition.

ACI 531, Specifications for Concrete Masonry Construction.

Design - AASHTO Standard Specifications for Highway Bridges, 17th Edition, 2002. Working Stress Design Method.

All concrete shall be Class 'S' unless noted otherwise.

Reinforcing Steel shall conform to ASTM Specification A615.  
All reinforcing shall be furnished as Grade 60.

Stresses: Concrete ..... f'c = 3,000 psi.  
Masonry ..... f'm = 1,500 psi.  
Grade 60 Reinforcing Steel .... fs = 24,000 psi.

Special Inspection is required for all masonry wall construction.

Wind Velocity 80 MPH, Exposure C.  
Wind pressure 18.0 psf for height segment under 12'-0  
Wind pressure 25.0 psf for height segment over 12'-0

Vertical Cells containing reinforcements shall be grouted solid full height.

Bond Beam with reinforcements shall be grouted solid full length.

Control joints shall occur at intervals not to exceed 24'-0.

See Project plans for wall layout, top of footing and finished grade elevations, footing step and wall joint locations.  
Height of wall may vary ± 2 inches.

For wall treatment and type of block see Project Plans.

Location of Construction Joint shall match the location of a control joint.

Compact backfill for footing and wall base minimum 95 percent of ASTM D698 maximum dry density.

Do not scale dimensions from drawings.

Pay Item includes all labor and materials for excavation, backfill, concrete footing and masonry wall with reinforcements.  
Pay Item is measured as wall height (H) times length of wall.  
Footing is included in the wall pay item.

Item No. 9140137  
SOUND BARRIER WALL (MASONRY)  
Measure: Square Foot

(GENERAL NOTES Continued Next Sheet)

|                                                   |             |                                                                                                                    |                                 |
|---------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------|
| DESIGN APPROVED<br><i>Shafiq H. Hasan</i>         |             | ARIZONA DEPARTMENT OF TRANSPORTATION<br>INTERMODAL TRANSPORTATION DIVISION<br><b>BRIDGE GROUP STRUCTURE DETAIL</b> |                                 |
| APPROVED FOR DISTRIBUTION<br><i>Teon A. Nehme</i> |             | SOUND BARRIER WALL<br>(MASONRY)                                                                                    |                                 |
| ROUTE                                             | PROJECT NO. | FA NO.                                                                                                             | DRAWING NO.<br>SD 8.02 (1 of 2) |
| LOCATION                                          |             |                                                                                                                    | SHEET NO.<br>OF                 |